AMENDMENTS TO THE CLAIMS

1. (withdrawn) A water quality analyzer, comprising:

a pair of sensor electrodes that are made of different metals from each other and are soaked in water and used, the sensor electrodes generating a sense voltage across the electrodes in proportion to concentration of impurities included in the water;

a detection means that detects concentration of solute from a voltage value of the sense voltage to provide a detection result; and

an impedance adjustment means that adjusts an input impedance across both ends of the sensor electrodes so that with the sensor electrodes soaked in a liquid of reference concentration, the sense voltage generated across the sensor electrodes agrees with a reference voltage corresponding to the above reference concentration.

2. (withdrawn) The water quality analyzer of claim 1, wherein the above impedance adjustment means comprises: a resistor and a voltage divider that are connected in series between both ends of the sensor electrodes; and a division ratio controlling means that controls a division ratio of the voltage divider;

wherein: the voltage divider generates a divided voltage obtained by dividing the sense voltage generated across the sensor electrodes by the division ratio set through the division ratio controlling means and then applies a differential voltage between the sense voltage and the divided voltage across the above resistor; and

the division ratio controlling means provides a calibration mode of the sense voltage and sets so that the sense voltage in the above reference concentration agrees with the above reference voltage in the calibration mode.

3. (withdrawn) The water quality analyzer of claim 2, wherein the above voltage divider comprises: a first and a second voltage dividing resistors that divide the above sense voltage; and a series circuit of an adjustment resistor and a switch means;

the above series circuit being connected between both ends of at least any one of the voltage dividing resistors,

the above division ratio controlling means changing the division ratio by turning on/off the above switch means.

4. (Currently Amended) A water quality analyzer, comprising:

a pair of sensor electrodes that are made of different metals from each other and are soaked in water and used, the sensor electrodes generating a sense voltage across the electrodes in proportion to concentration of impurities included in the water;

a detection means that detects concentration of solute from a voltage value of the sense voltage to provide a detection result;[[and]]

an impedance element that is connected between the sensor electrodes~~, its impedance value being a resistance value that can~~ to improve ~~non-linearity~~ linearity of the sense voltage;

an offset voltage supply means that superposes an offset voltage on the sense voltage; and

a setting means that changes said offset voltage of said offset voltage supply means and detection sensitivity of said detection means.

5. (Currently Amended) The water quality analyzer of claim 4, ~~comprising: an offset voltage supply means that superposes an offset voltage on the sense voltage; and~~ wherein said detection means comprises an amplification means that amplifies at a prescribed gain a voltage obtained by ~~superposing~~ the sense voltage and the offset voltage superposed on the sense voltage ~~at a prescribed gain to provide for the detection means~~, wherein the above detection means detects the concentration of solute based on a voltage value of an ~~input~~ output voltage ~~from~~ of the amplification means[[;]],

wherein ~~the analyzer comprises a~~ said setting means ~~that~~ provides a calibration mode of the sense voltage, and sets the offset voltage and the gain so that with the sensor electrodes soaked in a

liquid of reference concentration, the sense voltage generated across the sensor electrodes agrees with a reference voltage corresponding to the above reference concentration in the calibration mode.

6. (Currently Amended) The water quality analyzer of claim 4 or 5, wherein the impedance value of the impedance element is equal to or more than 1 kΩ and equal to or less than 1 MΩ.

7. (New) The water quality analyzer of claim 4, further comprising memory means to store the offset voltage and the gain obtained at the calibration mode.

8. (New) The water quality analyzer of claim 7, wherein said memory means comprises a RAM with a backup power source.

9. (New) The water quality analyzer of claim 7, wherein said memory means comprises a nonvolatile memory.

10. (New) The water quality analyzer of claim 9, wherein said nonvolatile memory comprises an EEPROM.

11. (New) A water quality analyzer, comprising:

a pair of sensor electrodes that are made of different metals from each other and are soaked in water and used, the sensor electrodes generating a sense voltage across the electrodes in proportion to concentration of impurities included in the water;

a detection means that detects concentration of solute from a voltage value of the sense voltage to provide a detection result;

an impedance element that is connected between the sensor electrodes, and having an impedance value which is a resistance value that can improve non-linearity of the sense voltage;

an offset voltage supply means that superposes an offset voltage on the sense voltage; and

an amplification means that amplifies a voltage obtained by superposing the offset voltage on the sense voltage at a prescribed gain to provide for the detection means, wherein the above detection means detects the concentration of solute based on a voltage value of an input voltage from the amplification means; and

a setting means that provides a calibration mode of the sense voltage and sets the offset voltage and the gain so that with the sensor electrodes soaked in a liquid of reference concentration, the sense voltage generated across the sensor electrodes agrees with a reference voltage corresponding to the above reference concentration in the calibration mode.

12. (New) The water quality analyzer of claim 11, wherein the impedance value of the impedance element is equal to or more than 1 kΩ and equal to or less than 1 MΩ.